

# RE 4/3 RPC

## Pre-assembly manual

### 1. HCP case preparation

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# Step 1: unscrew the lid of the HCP box



## Step 2: unscrew the top & bottom alloy bars\*

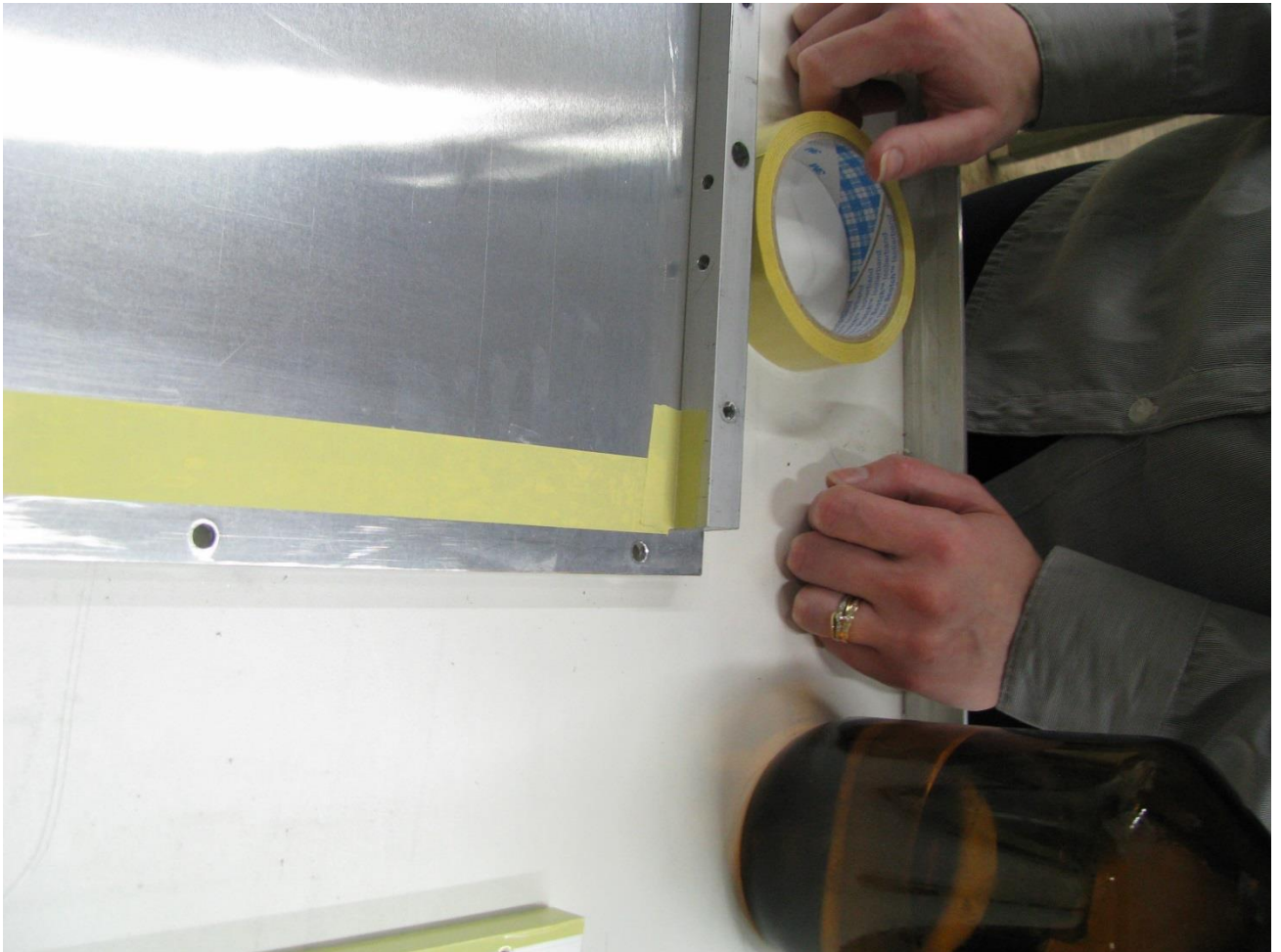


\* Unscrew from the backside

Step 3: clean the metal surfaces of the chamber and the alloy bars with alcohol or TeePol solution



## Step 4: Apply 3M electrical insulating tape on the chamber alloy pannel\*



\*Align one side of the tape with the mounting holes of the alloy bar, this will allow for enough overlap with the mylar later

\*Take care to not leave any gaps in the corners

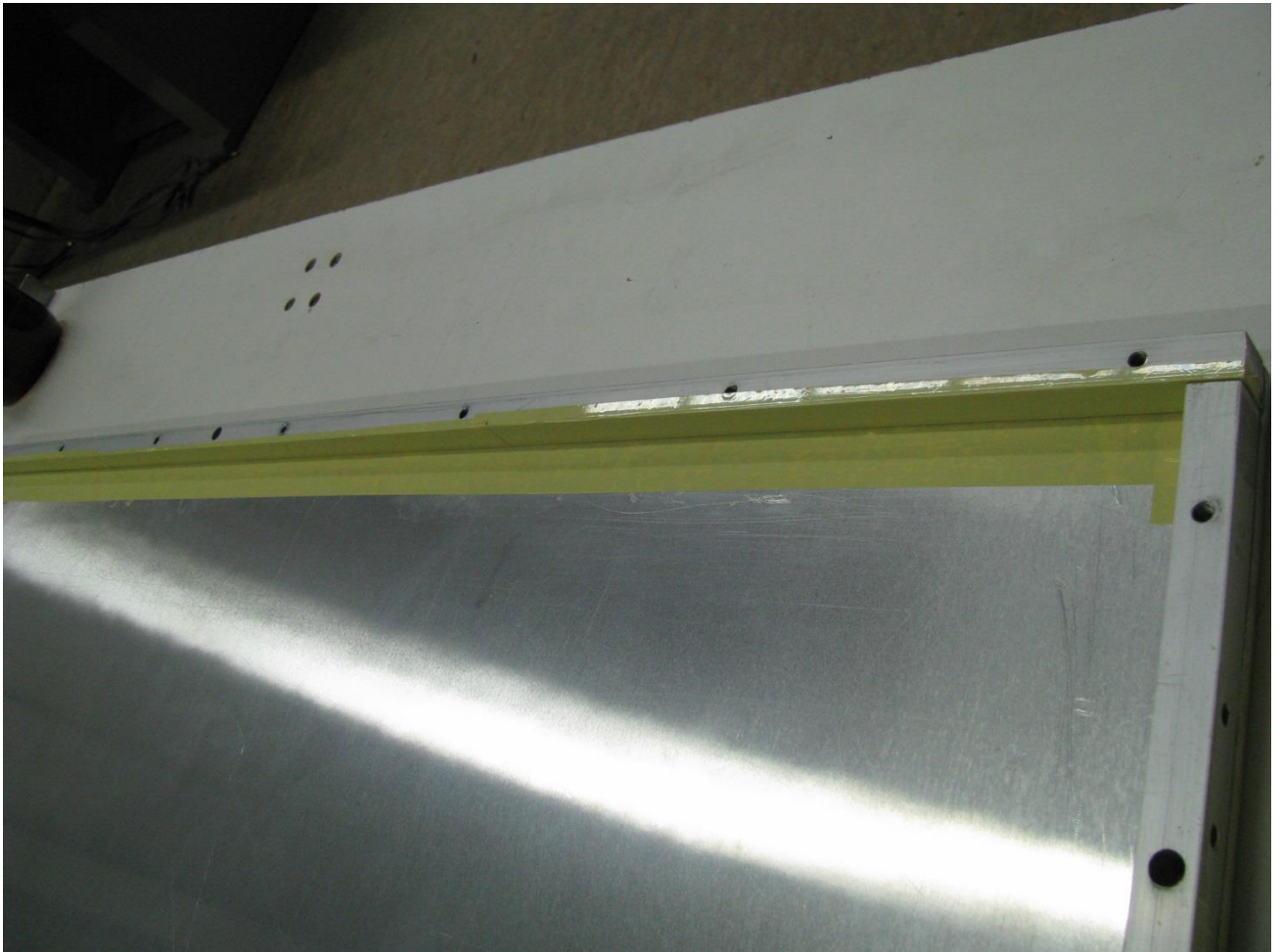
Step 5: Apply 3M electrical insulating tape on the alloy bars. Center the tape on the side of the bar that faces the inside of the chamber\*



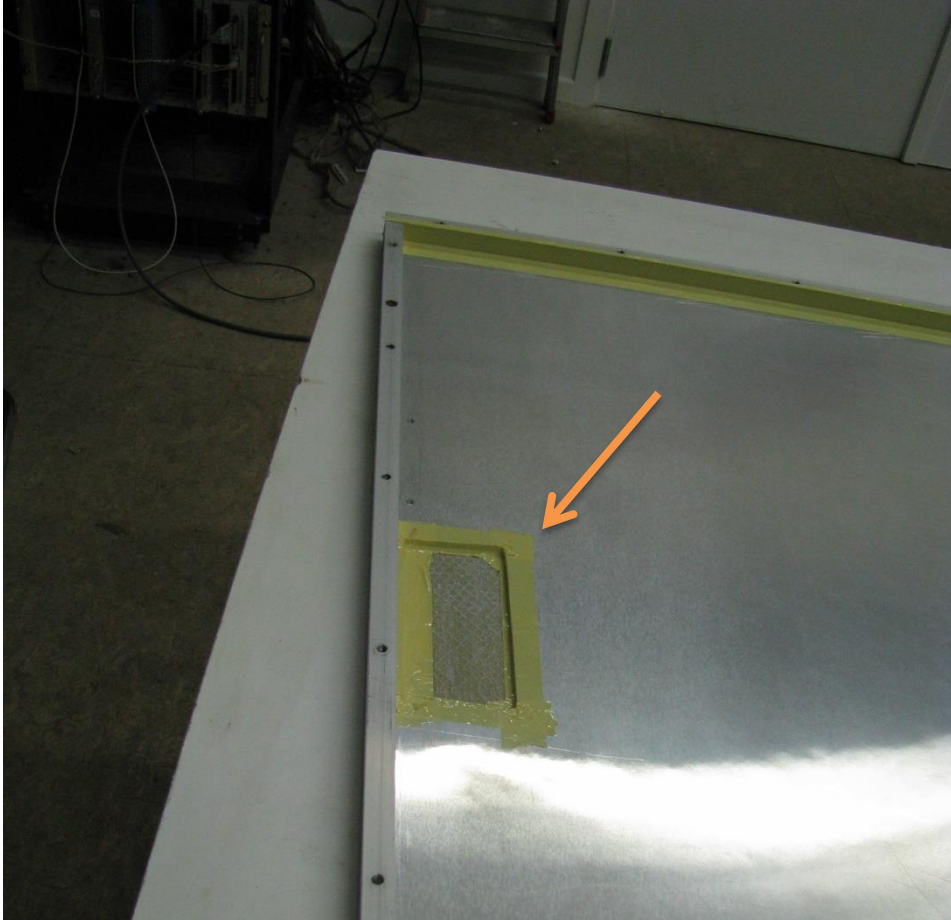
\*Overlap a bit on the corners

Step 6: Reassemble the bars on the HCP case.

The finished result should look like this

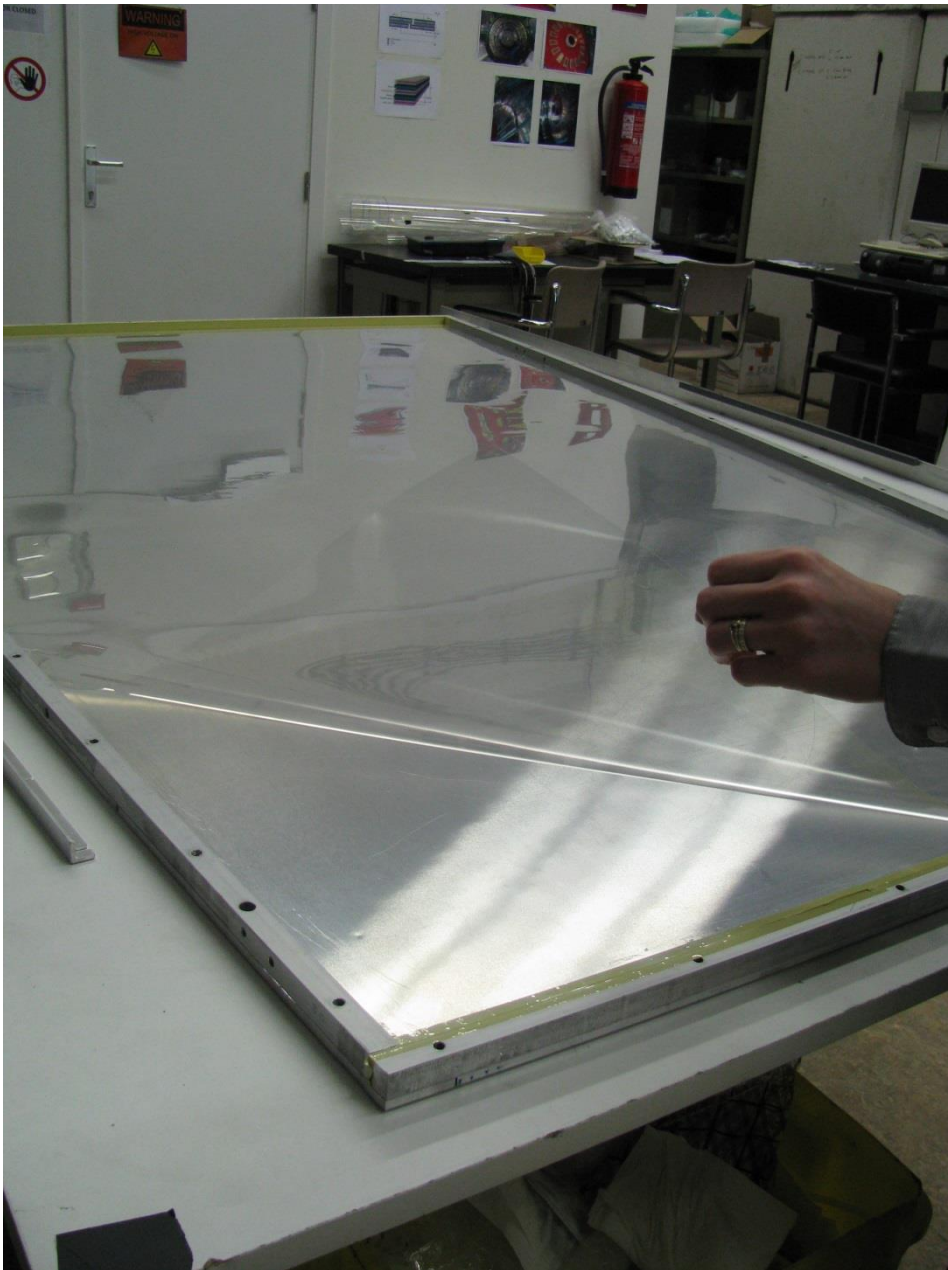


## Step 7: Apply 3M electrical insulating tape on the HV block cutouts edges

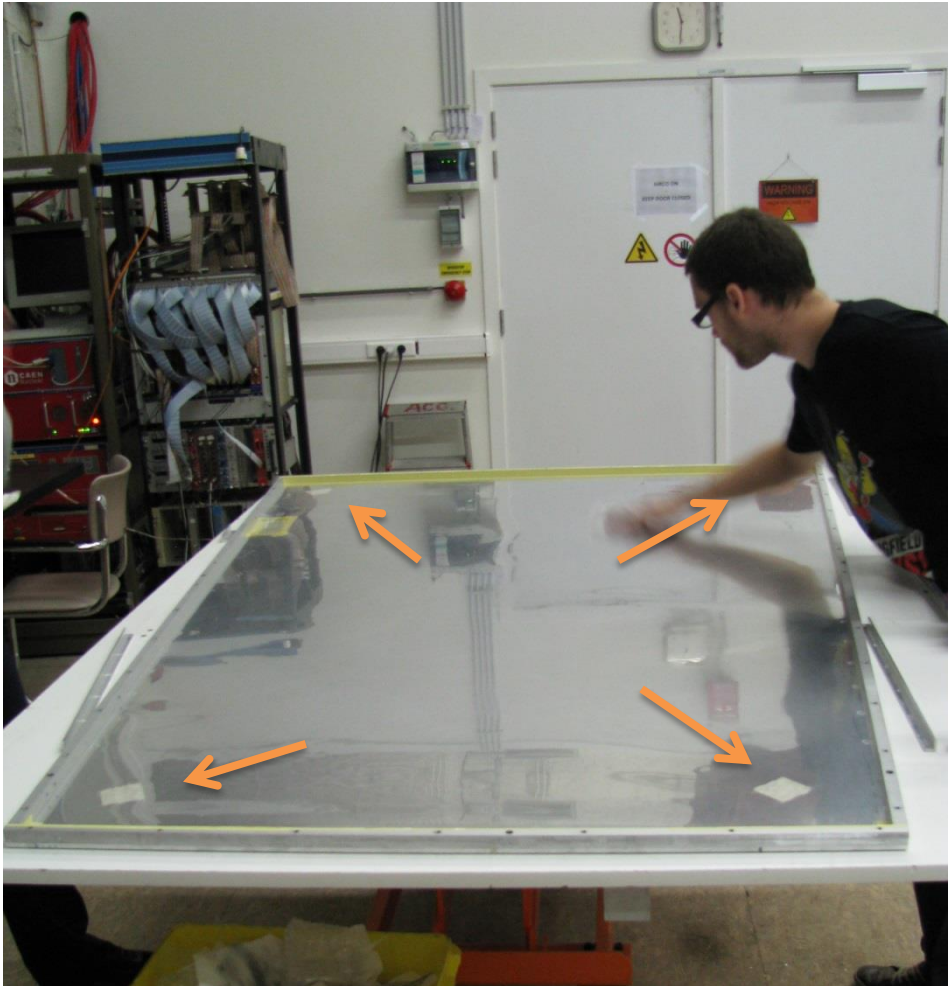




Step 8: Clean the bottom Mylar sheet with “A-KUR Dielectric cleaner” and put it in the HCP box

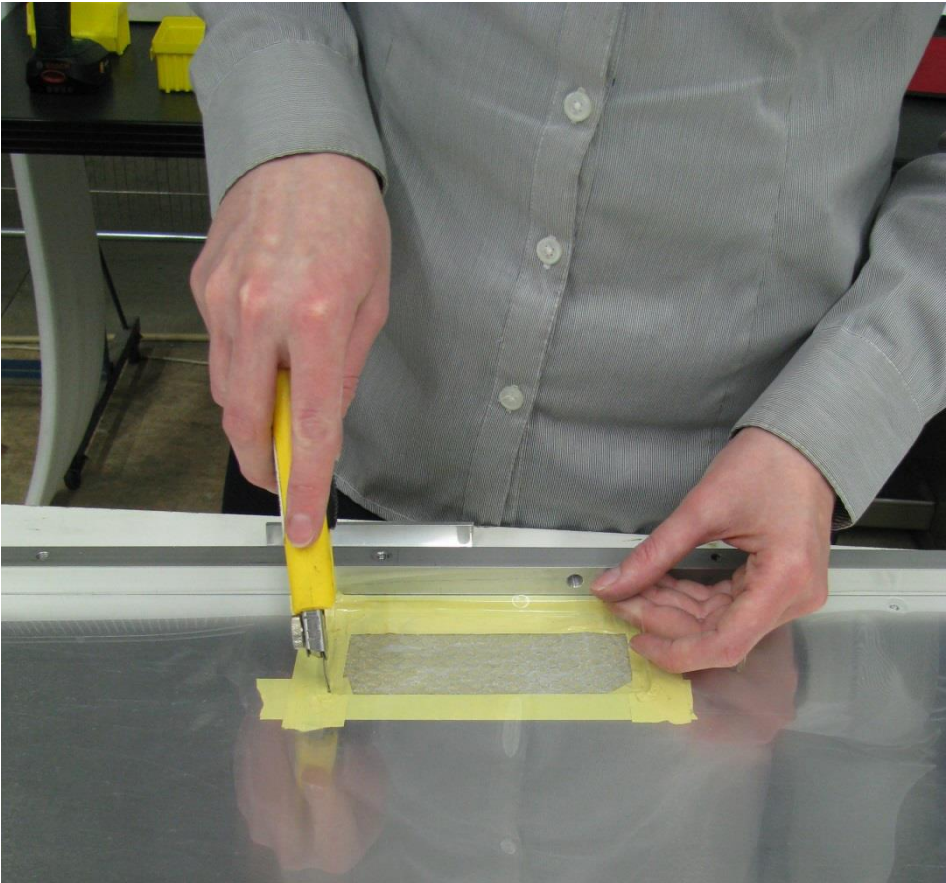


## Step 9: fix the mylar in place with 4 patches of double sided tape near the corners\*



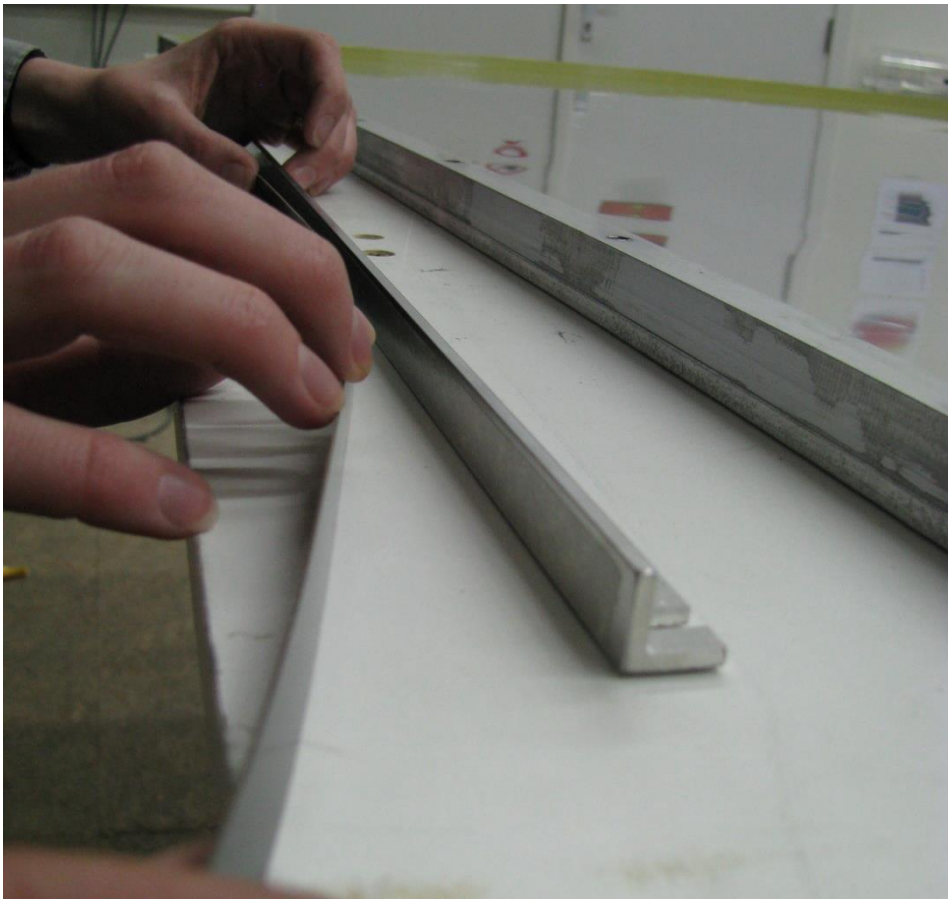
\*Carefully position the double-sided tape on the hcp bottom panel before removing the cover paper of the tape, then let the mylar roll onto the pieces of taped tape to avoid creases.

Step 10: carefully cut the mylar so  
the HV block can enter in the  
recess\*



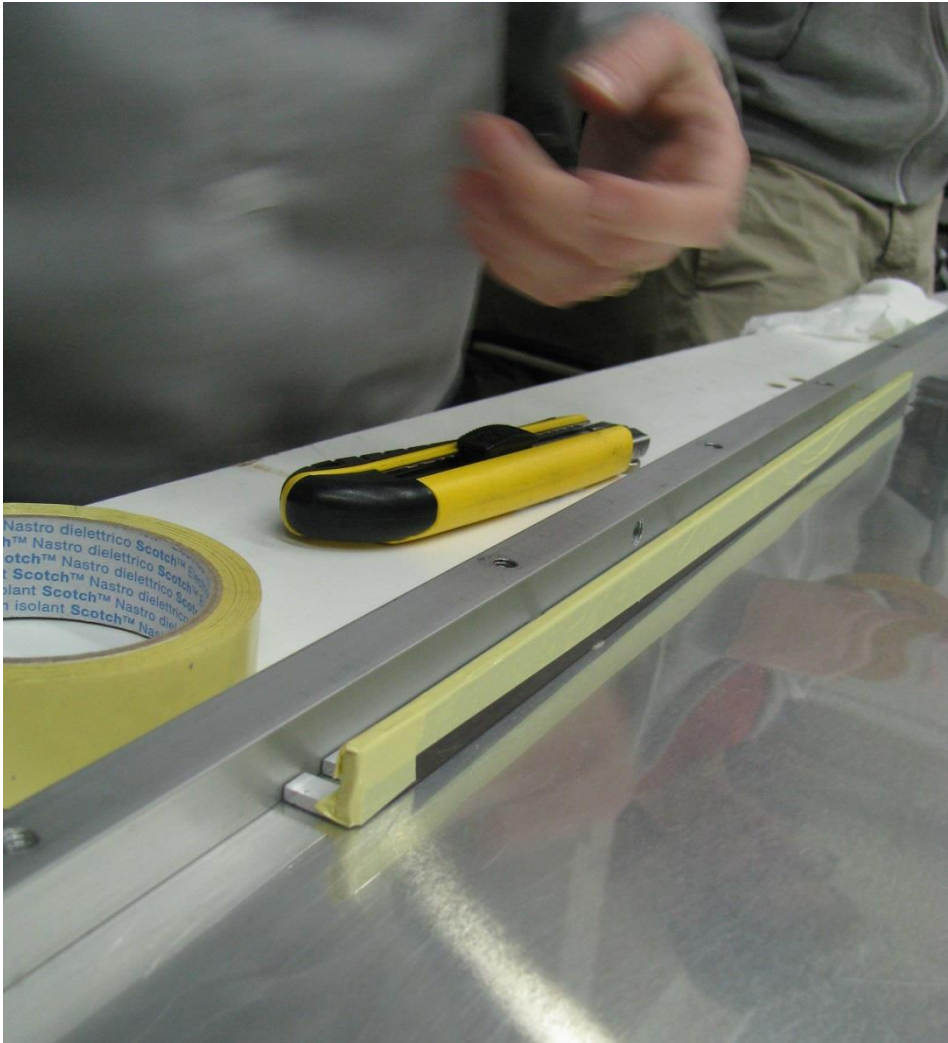
\*Cut up to the alloy bar but be carefull not to  
cut the insulating tape

Step 11: clean the 4 L-profiles with alcohol and apply double sided tape to the side that will face the gaps, then glue the bakelite strips on\*



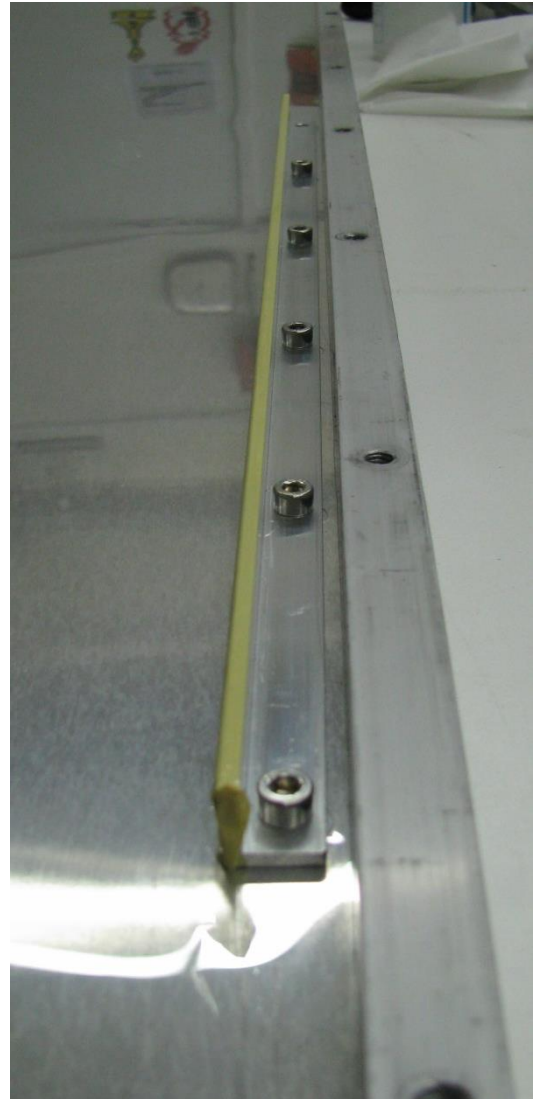
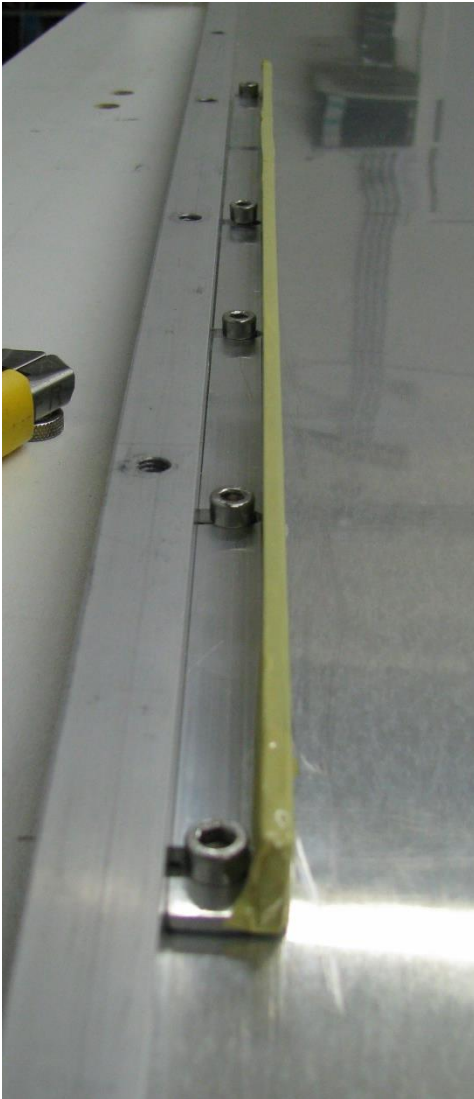
\*Carefully position the bakelite strip so it reaches all the way to the bottom to make sure there will be perfect electrical insulation between the HCP case and the copper Faraday cage

Step 12: Put a strip of 3M electrical insulating tape on the top of each L-profile\*



\*Overlap the sides also

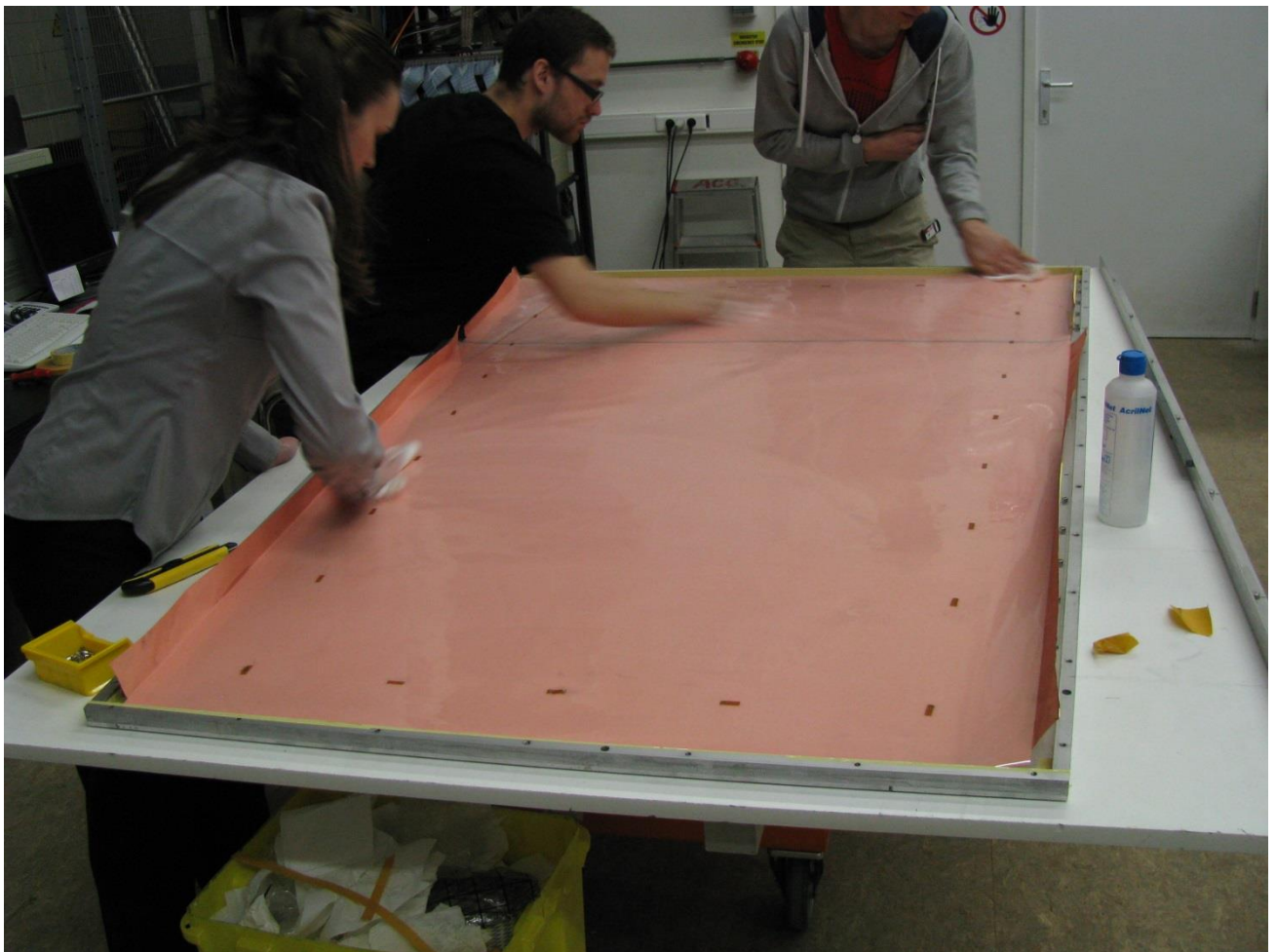
# Step 13: Mount the L-profiles to the HCP case, tightening the screws only lightly



# Step 14: Clean the copper side of the copper/mylar bottom sheet with alcohol or Teepol



Step 15: Position the copper/mylar sheet in the HCP case\*, with the mylar facing up, then clean the mylar with “A-KUR Dielectric cleaner”



\*bend the sideflaps upwards to avoid damaging them while cleaning and closing the box.

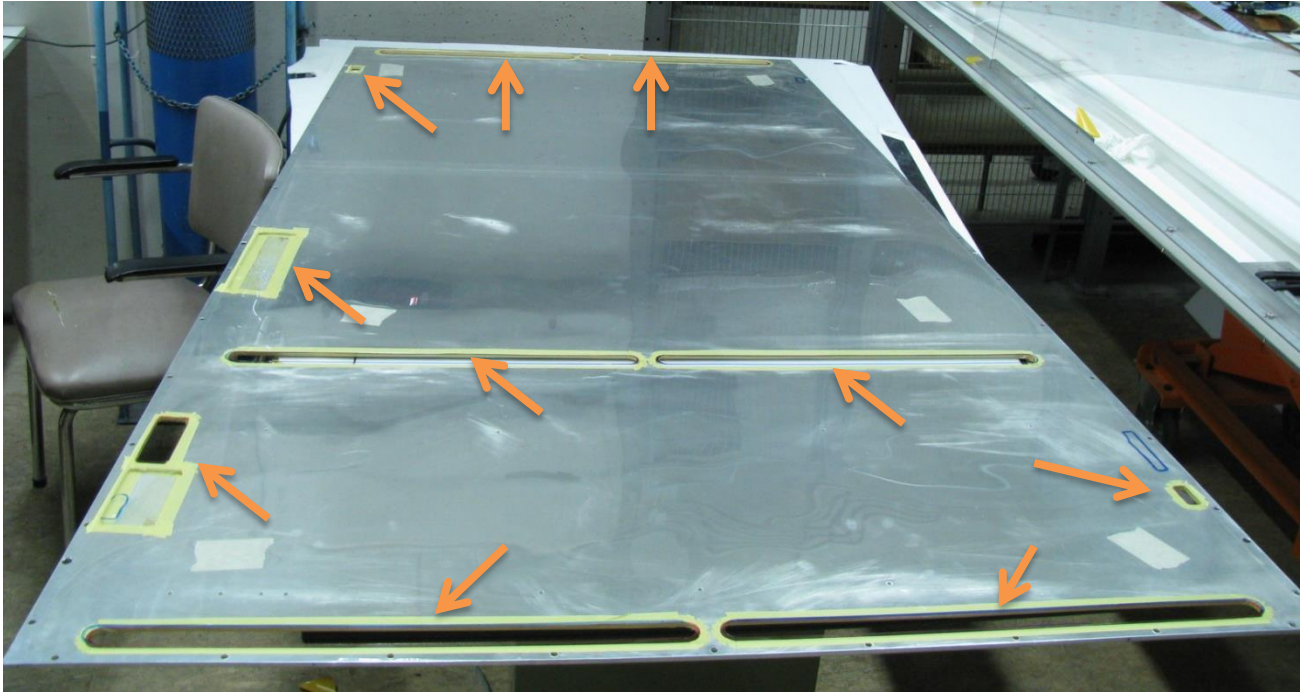


# Step 16: Clean the inside\* of the lid with alcohol or Teepol

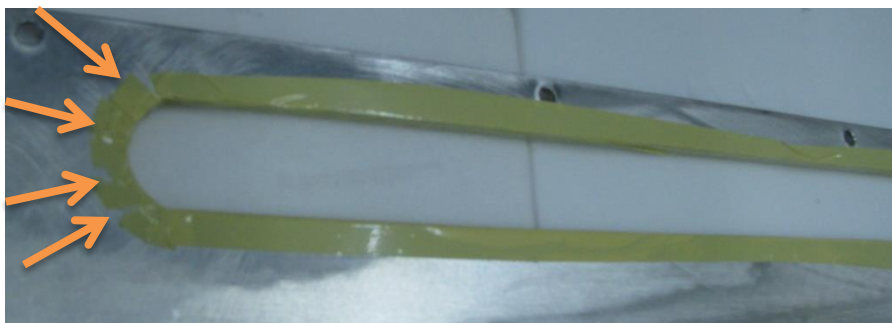


\*the inside is shown here

# Step 17: Tape off all the holes\* with 3M electrical insulating tape

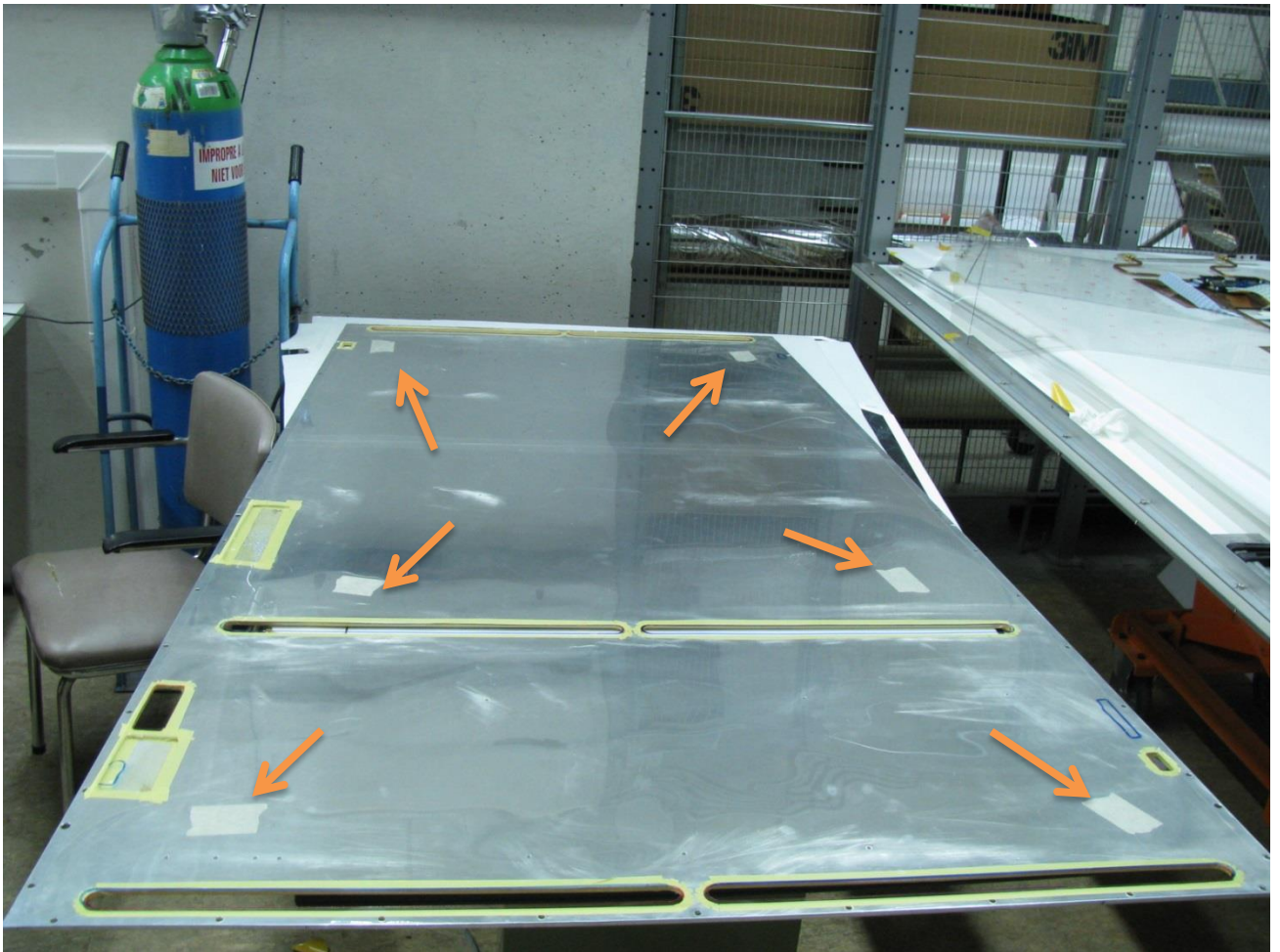


\*11 in total



Use small bits of tape to get around the bends in the top panel holes

Step 18: Clean the top mylar and position it on top of the lid, then use 6 pieces of double sided tape to fix it in place\*



\*Carefully position the double sided tape on the hcp bottom panel before removing the cover paper of the tape, then let the mylar roll onto the pieces of bared tape to avoid creases.

Step 19: Reassemble the lid on the HCP case with ~12 screws  
It is now ready to be stored.

